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EXAMINER	
SUAREZ, FELIX E	

ART UNIT	PAPER NUMBER
2857	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/576,223	VAN COPPENOLLE ET AL.	
	Examiner	Art Unit	
	FELIX E. SUAREZ	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections.

Alternative limitations

Alternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims. One acceptable form of alternative expression, which is commonly referred to as a Markush group, recites members as being "selected from the group consisting of A, B and C". See Ex parte Markush, 1925 C. D. 126 (Comm'r Pat. 1925). See MPEP § 2173.05(h).

Claim 27, recites "A computer ... configured to perform one or more of the following:"

No acceptable form of alternative expression is expressed for the claimed elements. Phrase "perform one or more of the following:" generates ambiguity with respect to the clarity of the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-
(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 17, 18, 32 and 33 are rejected under 35 U.S.C. 102(e) as being unpatentable over Raab et al. (U.S. Patent No. 6,935,036).

With respect to claim 17, Matsumoto teaches, a method of virtually measuring an object the method comprising:

performing an evaluation of a cloud of points virtually representing said object (see col. 1, lines 19-32, the articulated arm is commonly used to measure points on an object and these measured points are compared to computer-aided design (CAD) data stored on the host computer to determine if the object is within the CAD specification); and

calculating the value or values that approximate the value or values that would result from the measurement of said object by a measuring device (see col. 1, lines 19-32, in other words, the CAD data is the reference data to which

actual measurements made by the articulated arm are compared) wherein the evaluation is output (see col. 2, lines 1-8, executable programs provides instructions, such as inspection procedures, to the user).

With respect to claim 18, Matsumoto teaches, a method of virtually probing an object, the method comprising:

performing and evaluation of a cloud of points virtually representing said object (see col. 1, lines 19-32, the articulated arm is commonly used to measure points on an object and these measured points are compared to computer-aided design (CAD) data stored on the host computer to determine if the object is within the CAD specification); and

calculating or selecting a point that approximates a point that would result from the probing of a coordinate measuring machine (CMM) on the said object, (see col. 1, lines 19-32, in other words, the CAD data is the reference data to which actual measurements made by the articulated arm are compared; and see col.1, lines 34-37, an example of a articulated arm is a coordinate measuring machine (CMM)), wherein the evaluation is output (see col. 2, lines 1-8, executable programs provides instructions, such as inspection procedures, to the user).

With respect to claims 32 and 33, Raab further teaches that, the output of the evaluation is a report (see col. 2, lines 1-8, executable programs provides instructions, such as inspection procedures, to the user).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-16, 19-22, 28-31 and 34-36, rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (U.S. Patent No. 5,291,393) in view of Michiwaki (U.S. Patent No. 6,012,022).

With respect to claims 1, 19 and 28, Matsumoto et al. (hereafter Matsumoto) teaches a method (or a computer readable medium or a device) of evaluating a physical object, the method comprising:

reading instructions of a macro (see col. 7, lines 44-46),

said macro configured for use with measurement equipment, said measurement equipment being capable of performing measurements of a physical object (see col. 8, lines 5-17);

said macro comprising instructions for said equipment to perform an evaluation of a physical object (see col. 8, lines 35-45);

Matsumoto does not teach;

reading a numerical representation of said physical object.

But Michiwaki teaches in a measuring AID system that, the Dimensional Measuring Interface Standard (DMIS) language is a language specification that has been developed for exchanging data between a Computer Aided Design (CAD) and a three-dimensional measuring apparatus. The CAD system sends definition information of geographic shapes created as designed values and information of a measurement path to the three-dimensional measuring apparatus. The three dimensional measuring apparatus overwrites the measured results to a part program file in the DMIS language and sends back the resultant file to the CAD system (see Michiwaki; col. 5, lines 34-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Matsumoto to include a DMIS language as taught by Michiwaki, because the DMIS language of Michiwaki allows to a Computer Aided Design (CAD) system sends definition information of geographic shapes created as designed values and information of a measurement path to the three-dimensional measuring apparatus, as desired.

Matsumoto further teaches;

generating an evaluation of said physical object (see col. 8, lines 35-45 and FIGS. 9, 12) by performing the instructions of said macro upon the numerical

representation of the surface of said physical (see col. 7, lines 22-32 and col. 8, lines 5-17); and

outputting said evaluation (see col. 12 line 30 to col. 14 line 50, TABLE 1, 2 3, 4).

With respect to claims 2 and 29, Matsumoto further teaches, said numerical representation of the surface is obtained by scanning part or all of the physical object using an object scanner (see col. 7, lines 22-32).

With respect to claim 3, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said numerical representation of the surface is any of point cloud data, triangulated mesh data, rendered surface data, and polyline data (see col. 6, lines 34-40; col. 11, lines 34-41 and FIG. 11).

With respect to claims 4 and 30, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said measurement equipment is a Coordinate Measuring Machine, CMM (see col. 10, lines 43-58).

With respect to claims 5, 7 and 13, Katsumoto in combination Michiwaki teaches all the features of the claimed invention, except that Katsumoto does not teach;

wherein said macro comprises Dimensional Measuring Interface Standard, DMIS, commands; nor

comprising communicating said evaluation by part of a DMIS-measurement program or by using DMIS commands format.

But Michiwaki teaches in a measuring AID system that, the Dimensional Measuring Interface Standard (DMIS) language is a language specification that has been developed for exchanging data between a Computer Aided Design (CAD) and a three-dimensional measuring apparatus. The CAD system sends definition information of geographic shapes created as designed values and information of a measurement path to the three-dimensional measuring apparatus. The three dimensional measuring apparatus overwrites the measured results to a part program file in the DMIS language and sends back the resultant file to the CAD system (see Michiwaki; col. 5, lines 34-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Matsumoto to include a DMIS language as taught by Michiwaki, because the DMIS language of Michiwaki allows to exchange data between a Computer Aided Design (CAD) and a three-dimensional measuring apparatus, as desired.

With respect to claim 6, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said macro comprises CMM commands (see col. 9, lines 36-50).

With respect to claims 8 and 36, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, comprising communicating the said evaluation in the format of CMM measurement results (see col. 9, lines 36-50 and TABLE 2, 4).

With respect to claims 9, 34 and 35, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches that, the instructions of said macro that are performed relate to the measurement of data from the numerical representation of the surface (see col. 10, lines 43-58).

With respect to claim 10, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, comprising performing translations through the surface of the object (see col. 10, lines 43-48).

With respect to claim 11, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches that, the macro comprises instructions for performing a measurement comprising:

(a) determining elements of data that numerically represent the object, and that correspond to the position on the physical object to be measured, without increasing the resolution by calculating the co-ordinates of any additional points (see col. 10, lines 8-17);

(b) calculating additional points by interpolation of the determined elements, wherein the additional points increase the resolution in an area of a position to be measured (see col. 11, lines 34-41 and FIG. 11);

(c) calculating from the area of increased resolution a measurement of the object (see col. 11, lines 42-62).

With respect to claim 12, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches that, one or more instructions of said macro have been created by using said numerical representation of the physical object (see col. 10, lines 8-17).

With respect to claim 14, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said instructions are part of a measurement sequence generated by recording

commands of a Coordinate Measuring Machine measurement program (see col. 10, lines 8-17).

With respect to claim 15, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said instructions are part of a measurement sequence in a Coordinate Measuring Machine measurement program (see col. 10, lines 19-42).

With respect to claim 16, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said evaluation comprises the execution of steps on a computer in an automatic way without interaction with the user of said computer during the execution of said steps (see col. 10, lines 34-42).

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With respect to claim 20, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, comprising instructions which, when executed cause the computer to receive a numerical representation of the physical object from a remote computer (see col. 1 line 63 to col. 12 line 20).

With respect to claim 21, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches

that, the numerical representation is received from the remote computer by physical transport of a computer readable storage medium holding said numerical representation (see col. 11 line 63 to col. 12 line 20).

With respect to claim 22, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, said computer readable storage medium comprises magnetic disk, magnetic tape (see col. 7, lines 33-44).

With respect to claim 31, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; and Matsumoto further teaches, that the output of the evaluation is a report (see col. 12 line 30 to col. 14 line 50, TABLE 1, 2 3, 4).

4. Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (U.S. Patent No. 5,291,393) in view of Michiwaki (U.S. Patent No. 6,012,022) and Kreidler et al. (U.S. Patent No. 6,954,680).

With respect to claim 23, Matsumoto et al. (hereafter Matsumoto) in combination with Michiwaki teaches all the features of the claimed invention; and

Matsumoto further teaches providing instructions, which, when executed cause the computer to display a user interface (see col. 7, lines 54-59).

Matsumoto does not teach displaying a user interface on a web browser of a remote computer connected to the Internet.

But Kreidler et al. (hereafter Kreidler) teaches in a system for the electronic provision of services for machines via a data communication link, that, in the area of industrial automation technology and, in particular, in the field of numerically controlled processing machines, on the basis of an Internet connection, automatic services or data contents or software components required for this purpose are made available to a plurality of end-customers having machines with witch information is exchanged bi-directionally (see Kreidler; col. 7, lines 3-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination Matsumoto, Michiwake to include services for machines via data communication link as taught by Kreidler, because the services for machines via data communication are made to a plurality of end-customers having machines with witch information is exchanged bi-directionally through Internet, as desired.

Matsumoto further teaches, said interface allowing a user to send the numerical representation of the physical object over the Internet to a computer configured to perform said method (see Matsumoto; col. 7, lines 54-59).

With respect to claims 24-26, Matsumoto in combination with Michiwaki teaches all the features of the claimed invention; Matsumoto further teaches providing instructions, which, when executed, cause the computer to display a user interface (see col. 7, lines 54-59).

Matsumoto does not teach, displaying a user interface on a web browser of a remote computer connected to the Internet, said interface allowing a user to send said macro (or the title of said macro) over the Internet to a computer configured to perform said method.

But Kreidler teaches in a system for the electronic provision of services for machines via a data communication link, that, in the area of industrial automation technology and, in particular, in the field of numerically controlled processing machines, on the basis of an Internet connection, automatic services or data contents or software components required for this purpose are made available to a plurality of end-customers having machines with witch information is exchanged bi-directionally (see Kreidler; col. 7, lines 3-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination Matsumoto, Michiwaki to include services for machines via data communication link as taught by Kreidler, because the services for machines via data communication link allows to a plurality of end-customers having machines with information, exchange this information bi-directionally through Internet, as desired.

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (U.S. Patent No. 5,291,393) in view of Michiwaki (U.S. Patent No. 6,012,022) and Rabin et al. (U.S. Patent No. 6,697,948).

With respect to claim 27, Katsumoto in combination with Michiwaki teaches all the features of the claimed invention, except that Katsumoto does not teach, providing instructions, which, when executed, cause the computer to display a pay-per-use interface on a web browser of a remote computer connected to the Internet, said pay-per-use interface configured to perform one or more of the following:

(a) requesting a username and password to the remote computer user so as to enable a user to access an account for using the method;

(b) requesting billing information of the remote computer user;

(c) indicating a billing amount to the remote computer user, the billing amount relating to the number of evaluations performed; and

(d) providing a username and password to the remote computer user so as to enable a user to access an account for using the method.

But Rabin et al. (hereafter Rabin) teaches in an apparatus for protecting information that, as an example of pay-per-use or pay-per-view, each time an instance of pay-per-use software is used, the supervising program (SP) can record this in the RUN COUNT field. The RUN COUNT information can later be used for billing purposes (see Rabin; col. 43, lines 37-43).

Rabin also teaches that, an example of the user identification ID (USER) may be a username and/or password combination. An example of the identification of the user device ID (DEVICE) may include the hostname, host id, IP address, serial number or other hardware or device specific information that can uniquely distinguish this user device from other user devices (see Rabin; col. 44, lines 1-7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination Matsumoto, Michiwaki to include the supervising program as taught by Rabin, because the supervising program allows to execute a pay-per-use instructions requesting username and/or password combination for a billing purpose, as desired.

Response to Arguments

6. Applicant's arguments with respect to the claims have been fully considered but they are moot in view of the new ground(s) of rejection set forth hereinbefore.

Conclusion

Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sawaga et al. [U.S. Patent No. 6,804,575] describes an automatic programming apparatus that executes a numerical controller process.

Sutula, JR. [U.S. Patent Application Publication No. 2002/0114537] describes a model surface by numerical control.

Yamazaki et al. [U.S. Patent No. 6,400,998] describes a numerical control machine tool system.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix Suarez, whose telephone number is (571) 272-2223. The examiner can normally be reached on weekdays from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571) 272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300 for regular communications and for After Final communications.

March 20, 2008

/Felix E Suarez/

Examiner, Art Unit 2857

/Patrick J Assouad/

Supervisory Patent Examiner, Art Unit 2862